

NOTES ON THE DELPHACIDÆ IN THE BRITISH MUSEUM COLLECTION.

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When tabulating the genera of Delphacidæ* I was unable to place some genera with any certainty, as I was only acquainted with them through descriptions, which did not mention the characters which I used for primary divisions. Thanks to the kindness of the British Museum authorities I have been able to examine the Delphacidæ in their collection and to make the following notes upon them.

I wish to point out that *Delphacodes* Fieb. (*Delphax* and *Liburnia* of some authors) and allied genera are difficult to deal with, and unless great care be exercised, confusion will arise whenever one goes beyond a comparatively small faunistic area. The species of these genera can only be identified with any certainty by the use of the genitalia; not only should the characters found in the pygofer, anal segment and genital styles be used, but the aedeagus or penis should be dissected out. Many species have a wide geographical distribution and a large range of colour variation, which has led to synonymy. The demarcation between *Delphacodes* Fieb. and its allies is not definitely settled, and will not be until a study of species from various parts of the world shows us the range of variation within the genera. It is, therefore, with reservation that one must synonymize at the present time.

Canyra Stål.

The four species standing under this name, *C. strigulosa* Walk., *C. revertens* Walk., *C. retrahens* Walk. and *C. vittifrons* Walk. are the same as *Ugyops*, but they have a longitudinal depression along the first joint of the antennæ. I have not seen the type species of the genus.

Epibidis Fowler.

This genus is congeneric with the four species under *Canyra* and has the first antennal joint sulcate.

Ugyops Guén.

Delphax longicornis Walker and *Delphax media* Walker, both belong to this genus.

Consualia Distant.

I cannot separate this from *Ugyops*.

Onkelos Distant. = *Punana* Muir.

Ilburnia White. = *Nesosydne* Kirkaldy.

Delphax simulans Walk. belongs to this genus.

Ilburnia nephelias (Kirk.) = *I. disjuncta* (Muir).

Ambarvalia Distant.

The tibial spur is cultrate, half the length of the first tarsus, convex on both sides, with three teeth on the hind margin. The spur places this insect in the *Alohini*, otherwise the insect has a superficial resemblance to the *Tropidocephalini*.

Upachara Distant.

The genus has the spur small, thick, with a tooth at the apex, but none on

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the hind margin. I consider it should be placed in the Tropidocephalini. The carinae of the head and thorax are obscure.

Pundaluoya Kirkaldy.

The type of this genus, *Delphax ernesti* Kirby, has the tibial spur cultrate, thick, concave on the inner surface, without teeth on the hind margin. I place it in the Tropidocephalini. The carination of the head is similar to that of *Belocera* Muir but, apart from the spur, the terete antennae distinguishes it from that genus as well as from *Perkinsiella* Kirk. There is no carination on the lateral margin of the pronotum.

The genus *Peregrinus* Kirk. is quite distinct in general facies, shape and carination of head and thorax. The six species under the genus I place as follows:

1. *Pundaluoya ernesti* (Kirby). Type.
2. *Pundaluoya simplex* Dist. Typical. This only differs in the lighter colour from *P. ernesti* and is represented by a female. Only the capture of the male will decide if this be only a colour variety or not.
3. *Pundaluoya simplex* Dist. = *Peregrinus maidis* (Ashmead).
4. *Pundaluoya insignis* Dist. = *Perkinsiella insignis* (Dist.).
5. *Pundaluoya facilis* Dist. = *Perkinsiella facilis* (Dist.).
6. *Pundaluoya pulchella* Dist. = *Phyllodinus pulchella* (Dist.).

The front legs of this species are flattened, otherwise it would be a *Dicranotropis*.

Zuleika Distant.

First tarsus slightly longer than the other two together, spur as long as the first tarsus, broad, laminate, with small teeth on the hind margin. Lateral carinae of pronotum slightly diverging curved. I cannot separate this genus from *Chlariona*.

Opiconsiva Distant. = *Delphacodes* Fieb.

1. *O. fuscovaria* Dist. = *Delphacodes fuscovaria* (Dist.).
2. *O. insularis* Dist. = *Megamelus furcifera* (Horv.).
3. *O. derelicta* Dist. = *Megamelus furcifera* (Horv.).

This is a light female specimen of *O. insularis*.

4. *O. modesta* Dist. = *Delphacodes modesta* (Dist.).
5. *O. balteata* Dist. = *Megamelus furcifera* (Horv.).

The second specimen under this name is a different species.

6. *O. colorata* Dist.

The genitalia of this species are similar to *M. furcifera* (Horv.), but the head and thorax are black, except in the two brachypterous specimens, in which there is a light mark down the middle of the thorax.

7. *O. gloriosus* Dist.

One specimen without abdomen, similar to *M. furcifera* (Horv.).

Nilaparvata Distant. = *Delphacodes* Fieb.

The type of this genus is a damaged male, but it is in good enough condition to enable me to be sure of the synonymy of the species.

1. *Nilaparvata greeni* Dist. = *Delphacodes sordescens* (Motsch.) = *Delphacodes anderida* (Kirk.).

I was in doubt as to whether *D. sordescens* was the same as *D. anderida* until I had examined the Indian specimens.

2. *Nilaparvata mahensis* Dist. = *Delphacodes mahensis* (Dist.).

Toya Distant. = *Delphacodes* Fieb.

This genus is described as having a transverse ridge between the eyes, but it has the same carination of the vertex as *Delphacodès* (*Liburnia* of some authors); the medio-basal carina dividing the two basal areas is obscure. The pronotal lateral carinae slightly divergingly curved, not reaching the hind margin. Vertex as wide as long. Second joint of antennae slightly more than twice the length of the first. First hind tarsal joint slightly longer than the other two together, spur broad, laminate, as long as the first tarsus, small teeth on the hind margin.

Toya attenuata Dist. = *Delphacodes attenuata* (Dist.).

Kalpa Distant = *Delphacodes* Fieb.

1. *Kalpa aculeata* Dist. = *Delphacodes sordescens* (Motsch.).

This is represented by one female, the type, which, on account of the difference in coloration appears to have more pronounced carinae on the head than has the male. This species and *D. bakeri* Muir, are peculiar in having small spines on the basal joint of the hind tarsus.

Akilas Distant.

I cannot separate this genus from *Gelastocephalus* Kirk.

Hapalornelus Stol.

The spur of this genus is narrow, pointed and thickened, with the inner surface distinctly concave, with many small teeth on the hind margin. The pro- and metanota each have three carina. The long, narrow wings constricted in the middle where the cross-veins are, distinguish it from other genera.

Sogata Distant.

The type of the genus, *S. dohertyi* Dist., is represented by one female. The first hind tarsal joint is longer than the other two together; tibial spur laminate, many fine teeth on hind margin, not so long as the first tarsal joint. Second joint of antennae more than twice the length of the first. Vertex, longer than wide, base wider than apex; length of face three times the width. This comes very close to *Kelesia*.

1. *Sogata dohertyi* Dist.

2. *Sogata sternalis* Dist. Very near to *Kelesia kirkaldyi*, but it is necessary to dissect out the aedeagus.

3. *Sogata pusana* Dist. Very near to *Kelesia fieberi* Muir, but it is necessary to dissect out the aedeagus.

4. *Sogata distincta* Dist. = *Megamelus furciferu* (Horv.). The type and two other specimens are as above, while four other specimens under this name are *Sogata pusana* Dist.

5. *Sogata pallescens* Dist. Five specimens including the type are *Megamelus furcifer* (Horv.), while eight other specimens under this name are *Delphacodes sordescens* (Motsch.).

6. *Sogata thoracica* Dist. = *Delphacodes thoracica* (Dist.).

Delphax unicolor Walk., from Hudson Bay is a nymph and not of a delphacid.

Matutinus Distant.

This genus was placed among the Cixiini, but it is a Delphacid, which I consider to be indistinguishable from *Chlorionidea* Fieb.